

DAC Task Force: Strategic Plan

Update to Digital Arizona Council
Michele Norin (Group Facilitator)
August 2012

Purpose of Today

Review and Discuss Recommendations and
Suggested Actions

Arizona Strategic Plan for Digital Capacity - Table of Contents

Executive Summary

Digital Arizona Council Strategic Plan Task Force Letter

Acknowledgements

Digital Capacity is the Foundation for Arizona's 21st Century Economy

How Will Digital Capacity Availability and Use Impact Arizona?

Arizona's Digital Networking Capacity Gap

Rural Digital Capacity Build-Out: Digital Arizona Highways Act of 2012

A Comprehensive Plan for Arizona's 21st Century Economy Digital Infrastructure

Recommendation #1: DIGITAL BUILD OUT

Recommendation #2: INCREASE ADOPTION

Recommendation #3: LEADERSHIP

Recommendation #4: PLANNING AND ECONOMIC DEVELOPMENT

Recommendation #5: OUTREACH

Recommendation #6: EDUCATION AND JOBS

Recommendation #7: HEALTHCARE

Recommendation #8: ADVANCED RESEARCH

Recommendation #9: PUBLIC SAFETY

Recommendation #10: ENERGY AND THE ENVIRONMENT

Digital Arizona: The Way Forward

Key Messages

- Creating Arizona's leading-edge digital infrastructure for the 21st century is a task that must be shared by government, industry, educators, researchers, community institutions, entrepreneurs, and philanthropists.
- Arizona needs to remove barriers, develop public policy, and market-driven strategies that encourage private-sector investment.
- Cost effective access needs to be available throughout the entire state.
- Primary strategy is to enable the private sector but government and alternative funding may be required where the ROI is not feasible.

Arizona Strategic Plan for Digital Capacity - Recommendations

- **DIGITAL BUILD OUT - Facilitate the Build Out of High-Speed Digital Infrastructure by the Private Sector in Cooperation with Government Entities to Provide for the Needs of All Arizonans**
- **INCREASE ADOPTION - Increase the Use and Adoption of High Capacity Digital Connectivity and Technologies**
- **LEADERSHIP - Formalize and Sustain State-Level and Regional Digital Leadership**
- **PLANNING AND ECONOMIC DEVELOPMENT - Drive Digital-Related Community Planning and Economic Development**
- **OUTREACH - Drive Outreach through Policies, Programs, and Local Engagement**

Arizona Strategic Plan for Digital Capacity - Recommendations

- **EDUCATION AND JOB READINESS** - Implement Underlying Technologies, Digital Curricula, Collaboration, and Professional Development, to Promote Improvements in Education and Workforce Development
- **HEALTHCARE** - Create a Robust Statewide Telehealth Ecosystem
- **ADVANCED RESEARCH** - Catalyze and Enable an Environment of Discovery, Innovation, and Research
- **PUBLIC SAFETY** - Support and Align with the Public Safety Community in Enhancing and Leveraging Operations and Communication Capabilities
- **ENERGY AND THE ENVIRONMENT** - Leverage Digital Capacity to Reduce/Optimize Energy Consumption and Protect the Environment

Suggested Actions for Recommendation #1: DIGITAL BUILD OUT

- Implement the State of Arizona legislation that codified two highways for the price of one and support ADOT efforts to deploy conduit including rural pilot projects on an accelerated basis
- Encourage and support public/private partnerships to upgrade and provision Arizona's digital infrastructure in the most cost-effective manner
- Offer antenna and equipment placement on public-owned or controlled properties
- Assess and pursue anchor tenancy opportunities for government entities in the digital planning process to facilitate demand aggregation
- Drive digital infrastructure deployment to become more robust, redundant, and resilient over time to expand capacity for advanced applications and minimize the potential for interrupted service across the State
- Provide access to state rights-of-way on a cost-recovery basis for fiber middle mile and wireless providers in unserved and rural areas
- Develop and advocate for new rights-of-way/permitting standards and procedures to facilitate faster deployment of digital services
- Develop and pursue funding sources and mechanisms such as grants, digital capacity bonds, public-private partnerships, and tax incentives to aid infrastructure deployment

Suggest Actions for Recommendation #2: INCREASE ADOPTION

- Support and advocate for programs by industry and non-profits to ensure that every household has sufficient high-speed Internet access, digital devices, and the skills to use them
- Create a community technology resources database detailing community hotspots and facilities, training programs, technical support organizations, and sources for affordable/ digital devices
- Promote the use of community institutions to provide technology access and training
- Support community-based institutions in expanding digital literacy programs
- Develop a marketing plan and educational campaign to promote digital adoption and its fundamental importance to Arizona's future
- Remove barriers for re-use of digital technologies to help bridge the social digital divide
- Address the digital divide by increasing affordability through private and public programs of direct and indirect subsidy, lowering the cost of infrastructure, and fostering enhanced competition

Suggested Actions for Recommendation #3: LEADERSHIP

- Continue the current ASET Broadband Office Mapping and Planning Activities past the end of federal grant funding in December 2014
- Continue the Digital Arizona Council leadership role in promoting sufficient digital connectivity initiatives
- Promote public/private partnerships through the creation of community-based digital leadership councils to increase demand in communities with insufficient digital capacity
- Promote regional strategic plans that align with the state strategic plan
- Monitor, influence, and align federal digital legislation, rules, regulations, judicial decisions, and funding programs
- Work with the Arizona Corporation Commission to evolve the state Universal Service Fund to support digital services and related initiatives

Suggested Actions for Recommendation #4: PLANNING AND ECONOMIC DEVELOPMENT

- Conduct market assessments and prepare gap analyses
- Find and define market opportunities
- Model and measure economic impacts against proposed digital capacity policy initiatives

Suggested Actions for Recommendation #5: OUTREACH

- Provide resources and informational seminars on digital capacity to communities and regional organizations
- Provide collaboration opportunities related to digital concerns to communities and regional organizations
- Provide to communities digital last-mile infrastructure planning templates and checklists
- Provide digital technical consulting to communities (analyses, planning, proposals, and implementation)
- Provide assistance to community and regional organizations in writing digital grant applications

Suggested Actions for Recommendation #6: EDUCATION AND JOBS

- Connect universities, colleges, schools, libraries and the students' homes with sufficient digital capacity to enable advanced e-learning applications and serve the needs of the rapidly evolving statewide data based decision support system
- Evaluate the bandwidth, technology, research and support needs of educational stakeholders to create an adequate, effective and accessible support system
- Consider state and national network expansion initiatives for students, workforce and faculty living in limited-access communities
- Provide decision support information on digital curricula and online classes
- Provide access to digital curricula to the education community and student and workers homes
- Develop state supported technology and digital curricula literacy programs for both students and teachers
- Implement training programs for teachers on how to effectively use digital curricula and distance learning to effectively transform classrooms to an e-learning model

Suggested Actions for Recommendation #6: EDUCATION AND JOBS

- Provide assistance to small school and library districts in making E-rate applications
- Support policies to ensure that all youth become proficient in 21st century workplace skills including lifespan eLearning skills during their time in school
- Support community institutions that support informal learning in after school programs and job training
- Foster partnerships with community institutions that provide technology access and transition services support to students with disabilities and other special needs
- Assess state and local statutes, rules and regulations and determine which are barriers to adoption of 21st century education and workforce practices and provide recommendations for changes

Suggested Actions for Recommendation #7: HEALTHCARE

- Electronic Health Records (EHR) Exchange & e-health connections
- Attract and support advanced health information initiatives such as the Institute for Advanced Health
- Foster sustainable e-health business models
- Be able to use medical expertise wherever it exists (licensing issues)
- Implement a shared vision, strategic plan, and sustainable business model for the network
- Leverage the Digital Arizona Council to ensure progress and accountability
- Build on existing telemedicine and e-health networks and initiatives that are showing success
- Ensure sustainability for the e-health network
- Increase the availability and use of e-health applications

Suggested Actions for Recommendation #7: HEALTHCARE

- Remove barriers for appropriate reimbursement by health plans
- Improve the capacity to provide e-health to everyone everywhere
- Include concepts and language that ties in public safety, first responders, and ongoing care
- Create a guidance on payer codes - common lexicon for coding in the virtual space

Suggested Actions for Recommendation #8: **ADVANCED RESEARCH**

- State should identify big data and telepresence high impact areas and application areas that are most likely to enhance existing strengths
- Arizona should seek to become a world leader in high bandwidth medicine including Genomics and Proteomics
- Create two to three Gigabit Development Zones in Arizona with gigabit availability at affordable prices to drive experimentation, innovation and economic growth through digital capacity
- Define and drive high-performance digital initiatives for innovative programs to advance University research, industry collaboration, learning, and biotechnology

Suggested Actions for Recommendation #9: PUBLIC SAFETY

- Involve State agencies including the Department of Public Safety (DPS), Public Safety Interoperable Communications (PSIC), and Department of Emergency and Military Affairs (DEMA), as well as 9-1-1 public safety telecommunications entities, counties, cities, special districts, fire and law enforcement associations, and other stakeholders in working together to create a digital capacity blueprint for future communications coordination and interoperability
- Identify and support technological and policy solutions that promote the sharing of public safety infrastructure, where possible, to not only create an interoperable and robust communication system for Public Safety but also provide infrastructure for other uses
- Drive digital infrastructure deployment to become more robust, redundant, and resilient over time to expand capacity for advanced applications and minimize the potential for interrupted service across the State
- To help defray the costs of building out the NPSBN, promote the creation of an inventory and sharing of wireless vertical assets, both those primarily for public safety with commercial digital providers and those for commercial use with public safety parties
- PSIC should continue providing policy leadership in the development of legislation and state and local policies necessary to achieve wireless interoperability in Arizona
- PSIC should continue providing grant preparation assistance and technical consultation to public safety programs seeking federal interoperability and modernization grants

Suggested Actions for Recommendation #10: ENERGY AND THE ENVIRONMENT

- Use telework & mobility capabilities to reduce travel and increase productivity
- Arizona state government should create telecommuting jobs in rural Arizona
- Expand the state portal (www.az.gov) and catalog best practices in local government portals
- Adopt innovative digital smart grid applications

Next Steps

- Continue refinement of the recommendations and action items
- Continue building out the full plan
- Continue gathering input from a broader audience, such as local councils of government